

Alley Botanical Garden Strategic Plan Conservation and Sustainability

Ola Homaidan Nouredine^{a*}, Reem Bou ZeinEddine^b

^a*Alley, Lebanon*

^b*Beirut, Lebanon*

^a*Email: Ola.homaidan@gmail.com*

^b*Email: rbz.reem@gmail.com*

Abstract

Sustainability is a word heard everywhere lately whether the subject is energy, lodging, fishing or gardening. Living botanic garden plant accumulations are essential and underused overall asset for plant protection. A shared objective in dealing with a natural living gathering is to keep up the best biodiversity at the best financial and calculated effectiveness. However to date there is no brought together procedure for management living plants inside and among botanic garden. We propose a procedure that joins three markers of the administration need of a gathering: data on animal varieties imperilment, genetic description, and the effective costs related to keeping up hereditary description. In mix or alone, these pointers can be utilized to examine viability and effectiveness of living growths, and to employ a numeric protection motivation to an increase. Management decisions can be readily extended to other species based on our pointers. Accordingly, the preservation assessment of animal varieties can be shared through existing databases with other botanic gardens and give a depressed of suggestions toward a joined administration technique for living accumulations. Our approach is easily applied and well suitable for decision-making by gardens and organizations interested in plant conservation. Thus living a sustainable lifestyle has never been easier, and the Garden, "Alley Botanical Garden", which is the subject of this project, is committed to help visitors and neighbors find the most effective ways to be green. We must take action today to save our children's life and environment.

Keywords: Botanic gardens; Conservation genetics; living collections.

* Corresponding author.

1. Introduction

The world is changing quickly in regular life. There is some confusion about what “green” means. The term is sometimes utilized incorrectly as a part of a push to speak to reliable green consumers. Botanic gardens are central to an integrated in situ and ex situ conservation strategy [1, 2]. The Global Strategy for Plant Conservation highlights that need by requiring a minimum of 75 % of threatened plant species within ex situ collections, with at least 20 % available for recovery and restoration [3]. Living collections are already an important element of robust conservation programs [4, 5]. Botanic gardens are increasing in number and intensifying their focus on living conservation collections [6, 7].

The response to the inquiry, “Why do we need to go green?” is as confusing as the environmental issues the world populace faces. It isn’t only the recent generation that must manage this huge emergency; it will be a test for future generation regardless of the fact that more prominent move is not made throughout the following couple of decades. Some countries have sought to apply this strategy by building botanical sustainable gardens, for the most part include walled gardens, in which are shown a wide scope of plants in different situations, fittingly marked with organic names. More often than not, they have long-standing relationships with logical examination associations that are occupied with inquiring about plant scientific classification and different parts of herbal science. Be that as it may, when they were at first stable, their dispatch was not as involved as it is today, in that their part has been reached out to envelop the test of holding recorded buildups of living plants for the reasons for: analytical research, protection, shows case and teaching [8].

Alley Botanical Garden (ABG) is a glass sustainable public garden planned to be constructed. The idea of establishing this sustainable garden came as a result of a university project of the MBA class entitled “Leadership and Sustainability Development” by the students of MUBS University Alley. Currently the project is considered the first of its kind in the whole area if not all over Lebanon. Alley is a city in Lebanon located at 17 km uphill from Beirut on the freeway that leads to Damascus. Alley has a nickname “Bride of the summer” due to its importance in tourism. Being a major tourist destination due to its location and moderate climate, this resort city has increasing number of tourist and visitors all over the year. All this makes Alley a suitable place for launching a new type of winter public gardens.

The studies made showed that a sustainable garden project can help residents and visitors enjoy a healthy natural environment in an evergreen garden. This can be a place for people to release stress, depression and anxiety as well as maintaining social activities, generates knowledge about plants and applies that knowledge to conserve ecosystems, increase human wellbeing, and achieve sustainability everywhere.. Alley Botanical Garden sets an example of environmentally friendly projects. It is a solar garden project where solar energy will be used for heating, lighting and generating electricity that is essential for visitors who use portable devices like phones, computers and so on. This garden will have the opportunity for a successful start in educating people about sustainable projects that encourage less consumption of natural resources for economic and social development and to protect plants and ecosystems and thus enhance life for people and all living things, the Garden will raise sustainability as a core principle in its entire plan.

Alley Botanical Garden will be a private, non-profit garden offering nature lovers of all ages and opportunity to experience a calm green warm place all year round. This botanical garden will be located in the center of Alley. The garden will be constructed as a roof floor of a parking lot (a clever idea for maintaining space).

Since this garden is an environmentally friendly project, there are basic standards to make it a green construction or sustainable building and that refers to both the structure and the using of processes that are environmentally responsible and resource- efficient throughout the building life-cycle. This will be achieved in ABG by the close cooperation between the design team and the architect, the engineer, and later on the clients at all project stages.

1.1 Executive Summary

People depends on plants for each part of their lives, from food and medication to the assurance of watersheds and the upkeep of soil fertility, but plants and each other component in the living scene are undermined by the dangerous development of human populations, our developing utilization rates, and the employments of innovations that are regularly unsustainable. At the end of the day, we are exhausting the Earth's assets more quickly than regular procedures can recharge them and the rate at which we are doing as such is expanding with each passing year.

How much of the usual environment that we enjoy today remains to serve and enhance our own lives and the lives of those who follow us depends directly on the actions we take. The Alley Botanical Garden will help to accumulate rich scientific resources for the study of plants and educating people about them.

To sustain a healthy environment for people and other living creatures in Lebanon and around the world will require brave planning and an extraordinary determination that must extend into the unlimited future. In this unique situation, the Alley Botanical Garden's mission is to find and offer data about plants to save and enhance life, is both significant and progressively substantial.

The focal subject of the Garden's Strategic Plan is building sustainability. With this Plan, the Garden submits itself once again to finding and transmitting data about plants and environments; this knowledge will help us to sustain ecosystems locally, nationally, and globally. To accomplish this goal, the Garden will work to expand the data that is available concerning plants and will use that knowledge to promote effective and sustainable living practices that will protect biodiversity all through the world. In addition, the Garden will involve an increasing and various groups of people at home and overseas in learning about plants and the interdependence of people, plants, and the environment, and it will encourage human and economic foundations that are important to make these actions possible.

This Plan requires the Garden to recover the step at which it creates information about plants and applies that learning to moderate ecosystems, increase human wellbeing, and accomplish sustainability all over the place. Enhanced cooperation with the major botanical institutions of the world and other key accomplices is fundamental to accomplishing this objective. To ensure plants and biological communities and along these lines upgrade life for individuals and all living things, the Garden will raise sustainability as a center standard in all

its work, its programs of research and management, agriculture, and education and continuing operations – and make the relevance of sustainability evident to all its visitors. Going ahead, everything the Garden attempts will stress protection, rebuilding, and green living, three critical parts of sustainability. To achieve the dynamic objectives simply outlined, the Garden will reinforce its inner center, creating a workplace that attracts and retains outstanding talent, development a workforce that is strongly dedicated and varied, and implementing a business model that ensures its healthy economic future.

Remaining focused on these subjects and seeking after the objectives and targets outlined in the plan, the Garden will accomplish another level of universal administration in producing information about plants, empowering individuals around the world to apply that learning in mission for a practical world, and stimulating its institutional ability to remain a pioneer among the botanical institutions well into the 21st century.

1.2 Planning Process

The planning process clearly confirmed the significance of the Garden's main goal to support and enhance life by finding and sharing information about plants and their condition. The Garden's ultimate reason for existing is to build sustainability, basically through the preservation of plants and the ecosystems they own, both locally and around the world.

Going ahead, encouraging sustainability, including the conservation of usual resources, will outline all that we do. To help accomplish this point, the Garden will underline topics of preservation, rebuilding, and green living in all its building material. Furthermore, we will enhance the focus of our work to achieve sustainability in the areas where we are active. To accomplish these reasons, the Garden will likewise take care of its own sustainability enhancing our ability to attract and retain extraordinarily qualified individuals in paid and volunteer positions, stimulating our capital base, enlargement income and support streams, and working with enhanced sufficiency and effectiveness. The strategic goals detailed below are ordered into three categories:: 1) our center reason: creating and applying information about plants to help accomplish sustainability all around; 2) associating individuals to plants with attracting projects of agriculture, training, and understanding; and 3) stimulating institutional limit. This Plan shows our significant needs for the following years, expanding on our abilities. Having implemented this plan, the Garden will have enhanced its position as one of the most important leaders in encouraging and advancing sustainability. We will have essentially added to human learning about plants and significantly promoted individuals' entrance to that information. Furthermore, the Garden will be on a firm financial stability that guarantees our administration well into what's to come. Benefiting from our opportunities to make our vision and operating model

1.3 Strategy and Implementation Summary

It is critical that Alley Botanical Garden takes a proactive strategy in promoting the idea of sustainability in the community as well as creating a strong fund-raising program. To accomplish these goals, the project will have two groups overseeing the program's growth and development. The first group will be responsible for the project. This group will provide oversight of the program's service delivery to the community and will also be

responsible for building community support for ABG. The second group will be the Finance Group that will consist of Banks, Schools, University, ALEY Municipality, and Sustainability Association . The Finance Group will have oversight over the program's fiscal operation and fund-raising activities. The next step will be to recruit the volunteer personnel and facility supervisors for each season and use this group to promote the project in Alley city and the nearby villages. Special attention should be given to schools and universities in the area to promote the notion of environmental projects. Coaches and facility supervisors will be recruited by using the community and civic organizations. In addition, the MUBS university students of Leadership and Sustainability classes in the coming years will initiate a new program to recruit volunteer youth coaches from their own ranks under the supervision of the founders of this project. Students will be given their own environmental project to foster and look after. Alley Botanical Garden will also be working with the MUBS University to recruit college students as coaches. To motivate students to volunteer, MUBS will offer discounts on university credits for their participation in the project. Creating a coaching/supervision base will provide the garden the people power necessary to get its message to the entire community. The Sign-up for the program will be simplified by providing participation forms at MUBS University, and high schools. At each location, there will be a collection kiosk where the forms can be dropped off.

1.4 Competitive Edge

Alley Botanical Garden's competitive edge is twofold. One is the support of the community's public resources to build a successful environmental project that will have a positive impact on the attitude and practices of the area's citizens. The founders of the project are committed to strongly push the notion of the winter solar powered garden. The idea of the project will be promoted in high schools and universities, and volunteer coaches will be allowed to visit classrooms and speak to the students. The program's second advantage will be the support of the Ministry of Environment to encourage such innovative projects, and approve new standards of environmentally friendly resorts, and copy the example of sustainable projects to other Lebanese regions.

1.5 Funding Forecast

Table 1: The following is the funding forecast for three years.

Funding Forecast			
funding	Year 1	Year 2	Year 3
Direct Cost of Funding			
Sign-Up Fees	\$0	\$0	\$0
Business Sponsorships	\$12,000	\$15,000	\$18,000
Fundraising	\$12,000	\$12,000	\$12,000
Other	\$0	\$0	\$0
Subtotal Cost of Funding	\$24,000	\$27,000	\$30,000

2. Management Summary

Alley Botanical Garden will establish a team to manage the day to day operation and management of the sustainable garden project.

2.1 Personnel Plan

The program team will have the following positions:

- Director.
- Volunteer Coordinator.
- Sponsorship/Fundraising Developer.
- Area Supervisors (2).
- Clerical Staff (1).

2.2 Our Core Purpose: Promoting Sustainability

Goal: 1

Be a worldwide pioneer in creating exact scientific information about plants and their environments, broadcasting that data around the globe for various purposes, and using it to help direct environments sustainably all over the place.

Our duty regarding finding, recording, and separating information about plants and their environments has turned out to be basic. We need plants and ecosystem groups for their essential value to us as food, drug, and for different purposes; since they create the frameworks that help us; and in light of the fact that they are beautiful. Protecting them is in this way fundamental to the nature of our proceeded with life on Earth.

And in the coming years, the Garden will have:

Enhance the participation of environmental Garden in the expansion and communication of clear messages about botanical science and sustainability to various audiences.

Effectively promote our management spot in plant science and sustainable project which it's important to all stakeholders.

Goal: 2

Be a local leader in building up a sustainable world, emphasizing management, rebuilding, and the capable

consumption of environment resources.

Plants are basic to life on Earth, and the Garden's main goal calls for it to adopt an powerful position in making their significance clear to groups of audiences around the globe and building up the limit of individuals to moderate plants and the ecosystems they own.

Our sustainability procedures will emphasize preservation – recognizing, securing, saving, and soundly management populations of species and the ecosystems they possess; rebuilding – reestablishing and sustaining differing ecosystems; and green living – utilizing assets in ways that are environmentally and spread human wellbeing and welfare.

And in the coming years, the Garden will have:

Successfully educate people about sustainability and behaviors they can guard ecosystems.

Increase the quality, quantity, and availability of information about plants and the ecosystems they live in order to help build sustainability in other countries.

Goal: 3

Give admirable education programs about sustainability and create model translation that advances knowledge of the relations among individuals, plants, and the earth recourses.

Sustainability shape the evidence of life on Earth, and people should live in ways that direct their effect on plants and the ecosystem they involve. Sustainable living requires fundamental information of plants, the cycles of nature, the flow of energy, and the association of every living thing.

Educational programming and informational explanatory experiences are two of the most critical courses through which the Garden educates and inspires that understanding, and encourages environmentally responsible behavior among people of all ages.

The Garden's education and sustainability programs, grounded in the best management, will provide high ability, successive learning experiences that stimulate people's learning and provide them with useful strategies for responsible use of accepted resources.

Goal: 4

Strengthening institutional capacity, The Garden will have the capacity to accomplish its logical, green and instructive objectives in driving botanical knowledge, applying that learning viably, and advancing widely only if we effectively develop our staff and volunteers and strengthen our financial base We should draw in and hold an uncommon workforce and volunteer corps, and give sufficient monetary help to our differing and basically vital projects.

The Garden has a powerful and appropriate mission. Our capacity to satisfy that mission relies upon the vision, information and drive of our workers, and the volunteer corps of Board pioneers, companions, and assistants who freely give their time and gifts to our challenges. To remain an authority institution and easily explore the time of move to another president, we should proceed to pull in and hold very qualified individuals, stimulate them and strengthen their consistent skill enhancement. In achieving greater diversity in our work force we will maintain the garden reputation as friendly and sustainability place to work.

Nonprofit organizations of all kinds are facing economic realities; we have to pay attention to our revenues and expenses, The Garden must develop and implement plans to expand its benefaction, control operational costs increase compensation in order to attract and to retain a high quality workforce, expand and diversify clear income, and strengthen the meeting of our members and customers in supporting our strategic improvements.

3. Conclusion

The goal of continued growth is to be a sound one mainly in low and middle- income countries where growth means more health, better education and more safety from various threats of wellbeing. Also, high -income countries can have solid growth if it is based on resource saving technologies that do not disrupt planetary boundaries. We have responsibility towards the coming generations to leave them a livable planet, so we must think ahead morally and practically to ensure the well- being of generations not yet born. The new trend for development should be coupling economic growth with environmental sustainability.

The future we want for our children is through sustainable development.

Imagine the Alley Botanical Garden in future. As a result of the implementation of its Strategic Plan, the institution and the area around it will change for the better.

We recognize that this Plan is very ambitious. It will require continued and challenging work from all those who currently care about the Garden, and countless others whom we must recruit in the cause of sustainability. While ambitious, the garden is considered as a plan and not a normal dream.

Acknowledgements

I have taken efforts in this project. However, it would not have been possible without the kind support and help of many individuals and organizations. I would like to extend my sincere thanks to all of them.

I am highly indebted to (Municipality Alley) for their guidance and constant supervision, as well as providing necessary information regarding the project, and for their support in completing the project.

My greatest appreciation is for the efforts of Dr.Reem Bou Zeineddine my Instructor at Modern University for Business & Sciences, for her patience and support during my work on this project.

Special thanks are for MUBS for giving me the opportunity to produce this project, and helping me in

presenting it.

And special thanks for Miss Reem Mohamed Al Dahmani Landscape Engineer for designing the maps and AutoCAD require for my projects' building.

Finally, I dedicate this work to my husband Zaher Nouredine for his understanding and support in completing this project.

References

- [1]. Maunder, M., B. Lyte, J. Dransfield & W. Baker. 2001. The conservation value of botanic garden palm Collections. *Biological Conservation* 98: 259–271.
- [2]. Kramer, A., A. Hird, K. Shaw, M. Dosmann & R. Mims. 2011. Conserving North America's threatened Plants: progress towards target 8 of the Global Strategy for Plant Conservation. *Botanic Gardens Conservation International U.S.*
- [3]. Wyse Jackson, P. S. & K. Kennedy. 2009. The global strategy for plant conservation: a challenge and opportunity for the international community. *Trends in Plant Science* 14: 578–580.
- [4]. Havens, K., E. O. Guerrant & M. Maunder. 2004a. Conservation research and public gardens. *Public Garden* 19: 40–43.
- [5]. Griffith, P. & C. Husby. 2010. The price of conservation: measuring the mission and its cost. *BGJournal* 7:12–14.
- [6]. Dosmann, M. S. 2006. Research in the garden: averting the collections crisis. *Botanical Review* 72: 207–234.
- [7]. Oldfield, S. F. 2009. Botanic gardens and the conservation of tree species. *Trends in Plant Science* 14: 581–583.
- [8]. *Botanic gardens: modern-day arks*. MIT Press 2010, Cambridge.